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<120> SMAD-INTERACTING POLYPEPTIDES AND THEIR USE

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<150> PCT/EP98/03193

<151> 1998-05-28

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<151> 1997-06-02

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| Ser | Tyr | Thr | Pro | Asn | Ser | Phe | Ser | Ser | Glu | Glu | Leu | Gln | Ala | Glu | Pro | 530 | 535 | | 540 |
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aaggctggag ctgggaaggc acctgaaaag tgagcctagt gggcagggcc taccatcat 960
gccctgcatt gtccagatta ggggagccag ttctagactg gtccctccacc tccaacacac 1020
acccccatct gtccagaggg ttggcaaact actctgctct ccctgaaagt ggtccttccc 1080
ctgtttaggc tgctcaaca aggctagatg gggctccccg ggagtgccag ggcagcagca 1140
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tggcatcatg gggcatgaag tgtgcttaaa cagttaaaag gtcccagttt ccaccttct 1260
ctggcccagt aggatcccca atctgactct ttcaaggctc agacattcct ggtgacccaa 1320
tgttgtggac tgatgaggca cctgagcagt ctggctgcc aacttgggc ctgcctcca 1380
cccaacactg gaactccagt actcccga 1409

<210> 6

<211> 960

<212> DNA

<213> Mus musculus

catgatttta acaagtatat gnaaaagaat cacacatcaa atcaagtaca aaaatatcca 300
aaccacctgt tacaactgca ctgtttccat tatcctgcac agtatttaac ataaaaattt 360
agcagtttcc aaaaatattc attaatcac ttgaagttac tgccccntgc aaaacagtga 420
aacaccaggc aaaccaanct gcctttaatt nttttnnacc aaatcntcct ccnna 476

<210> 8

<211> 850

<212> DNA

<213> Mus musculus

<400> 8

gacagaaccg gttcgaccg acagacggac agaggaccag acagccacta aggagcgctt 60
actgcccccc tccgggcccc tgccccgaac tccagcccca gcgcctgtta ctgccccaga 120
tacagcaaga tgcgcggtcc tggcagcgag acacgggcga gcactgtccc ccggtccccg 180
agccctggcc cctagcgccc agcgtctgtg ccctgcatca gggaggggccc cggagacccc 240
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gccaccatg ctctctctgt cgccgcgcag cgcgctggtc tccgtctatt gccgcagat 360
ctttctcctt ctgtccacgg cagttactac attgtcatcc gtggtggccc tgggagccaa 420
catcatctgc aacaagattc ctggcctggc cccacggcag cgtgccatct gccagagccc 480
acccgatgcc atcattgtga tcggggaggg ggcgcagatg ggcatcgacg agtgccagca 540
ccagttccga ttcggccgct ggaactgctc cgccctgggc gagaagaccg tcttcgggca 600
agaactccga gtagggagtc gagaggctgc cttcacctat gccatcacgg cggcgggct 660
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ggagaagcaa ggctactaca accaggcgga aggctggaag tgggggggct gctcagcgga 780
cgtccgctac ggcacgact tttctcgtcg ctttgtggat gcccgtaga tcaaaaagaa 840
cgccggatcc 850

<210> 9

<211> 475

<212> DNA

<213> Mus musculus

<220>

<221> misc_feature

<222> (446)..(446)

<223> n can be any nucleotide

<400> 9

agacactggt gtattcagat tatttcttag tggctggctt ttgattctag acagagattc 60
ttaaagtcct tttaaaaaag tggatcagga atcctgttat gggccttgat tgttccagac 120
attagaagta aatatatttg atgaaggaaa tcttgaaaaa atactgacta gataaaaatt 180
gtaagccaag ctttctgact gaaaaatgct acctagccac agatcattgc tgttatttgg 240
ttcattgcat gagtgtgtat gtgtgtgtat atatgtatac acatatatat gtgtgtgtgt 300
gtgtatgtgt acacacacat atatgtgggt tttgggggggt atggataaga tgggtgctatg 360
aaaataattt gtctcttggt ttaattaatg aagcttctgt catgccaaagt aatctttaag 420
ggagaatcag aacttttcat taaaantcat aagggaaca gaatttgtac ggggtg 475

<210> 10

<211> 1537

<212> DNA

<213> Mus musculus

<400> 10

agcggagttt cagtctgcgg acacgcgtgg agcccttgcc cgggcctcgg tgggtctgag 60
gcgctgcgag ccctgggtaa ccacggcctc gagctgctgt cctcaccaag atcctccaat 120
tctgaaccaa gaacaaaaaa atgtttcagc ttcgtgcatt tcaaagaagg cattaactag 180
agcccagttt ggcggaacaag ttcttcattc aaaagagagt cctgttagga tctactgtgtc 240
caaaaagaac acatttgttt tgggagggcat tgattgtact tatgaaaagt ttgaaaatac 300
tgatgttaac accattagtt ctctttgtgt tcctattaag aatcatagcc aatctattac 360
ttctgataat gatgtgacaa cagaaaggac tgcaaaagag gatattacag aaccaaata 420
agagatgatg tccagaagaa ctattcttca agatcccata aagaatacat ctaaaattaa 480
acgttcaagt ccaagaccta atttaacact atctggccgg tctcaaagaa aatgtacaaa 540
gcttgaaact gttgtaaaag aagtaaaaaa atatcaggca gtccacctac aggaatggat 600
gattaaagtc atcaataata atactgctat atgtgtagaa ggaaagctgg tagatatgac 660
tgatgtttat tggcatagca atgtaattat agagcggatt aaacacaatg aacttaggac 720
cttatcaggc aacatttata tcttaaaagg attgatagac tgggtctcca tgaaagaagc 780
aggatatccc tgttatctca caagaaaatt tatgtttgga tttccccaca actggaagga 840

<211> 572

<212> DNA

<213> Mus musculus

<220>

<221> misc_feature

<222> (505)..(572)

<223> n can be any nucleotide

<400> 12

tctggttcta cttttaattt ctacttcatt ctcttcactt gacaaatgtg atgaggaccg 60
gcaataactgt gatacaccta tttgattttc agttttctgc agttttgagg gcaacttggt 120
ctttttcata aaatcattgg tgagcatttg tttacttttc gggcaaggta tctgaatatg 180
tctggcagtg attatgtcac attcattgca gtcctccttg gtattgcctt caaatcccac 240
tctatgttca aagggtctct gagacttact ggtagaactt ggagttccat gtatatctga 300
gtcactttct tcttgatgct ttgctttgaa aaatccgata ttccttcaat agagagactg 360
tagtctatac atctttgctc tatcaacttt ttgtttctaa gtggtgttat taaaacataa 420
gctctcttct gactgagaag cgggtgtctt ctttctttgc cggaggtagc tgttccagtg 480
attcaaggga tcaatgggta ctcantctct ctaanctata tcataagggtc tacttaatgc 540
tggcttttgg aagantaatt ctttatctct gn 572

<210> 13

<211> 579

<212> DNA

<213> Mus musculus

<220>

<221> misc_feature

<222> (315)..(579)

<223> n can be any nucleotide

<400> 13

ctgctgtgag gaatgctggg attggtgttt ctgatgaagc tgcgcaagtt gctgcctttg 60
catttgaact agctgctggt gatgtgtctg aaactgctct tctgtgatgc cccctgttac 120
tgatatgccg ttcttgctgg tgttcaataa agctacggat gctgcagaaa ctcttttact 180

gctcacagtc tgccctggtt ttcttgaggt acattcttca ctatcaatgt cctgtacatt 240
 tagtagcctt ggctggaaac actgtagtcg acatgatctg atattgctta atatttcaga 300
 aagagacagt ctatnttcac aaggtttact gggaagcatt ggtccgagag aaattagaag 360
 aaaatctata gtttggaag acttgaaaac ccgttcagca tctcanggtc tatctgtttc 420
 aggacggggt catgttctgt ggatatccgt ccattatgaa cctgccactc tgccattccc 480
 ctccttgcaa tcctatacat cttcttggac tgtaatttcg taaganatgc ttataactcaa 540
 cttatccaat ctgccactct gaatttcnac atatggtan 579

<210> 14

<211> 403

<212> DNA

<213> Mus musculus

<220>

<221> misc_feature

<222> (400)..(400)

<223> n can be any nucleotide

<400> 14

ggaaagacaa agatgcagga tatagtactt ggaacaggct ttttaagtat tcctcctaaa 60
 aatgaggctg agcacataga aaatggggct aagtgtccga atttggagtc cataaataag 120
 gtaaagtgtc tttgtgagga cactgcaccg tctcctggta gggttgaacc acagaaggcc 180
 agttcttctg ctgacgtggg catttctaaa agcacggaag atctatctcc tcagagaagt 240
 ggtccaactg gagctgttgt gaaatctcat agtataacta acatggagac tggaggctta 300
 aaaatctatg acattcttgg tgatgatggc cctcagccgc caagttgcag cagttaaaat 360
 cgcactctgct gtggatgggg aagaacatat cagaagcaan tct 403

<210> 15

<211> 555

<212> DNA

<213> Mus musculus

<220>

<221> misc_feature

gtctctgtga tcctgacatg actggagttc ttcccattga atgtaactct ctgtacgata 300
agtaatctcc ttcagtacgc cttgtgggggt caccgagatt tacagaagcc gttgaagaca 360
cgctactctg tctctgaata gtaatccgaa tgactgctgg cactagtcgg tcattcnngg 420
agatacccac atttctccat gcctggctgg ggcaatctct gttgtaantg gtatccaata 480
ttgggtctaca ttgttatggt taaaaaaatc tgtttggaga atgctttgca tactgtnaat 540
ttctgcctcn caaatnttgg aaggncgga 569

<210> 19

<211> 338

<212> DNA

<213> Mus musculus

<220>

<221> misc_feature

<222> (42)..(321)

<223> n can be any nucleotide

<400> 19
gagacattct gaagggcagg aatgaggcgc tctccccagg gnagatggtg gtgaggctgc 60
tgaggggggaa ggtgatatct ttccatcttc tcattacctg ccaatcacca aagaaggccc 120
tcgagacatt ctggatggca gaagtggcat ttctgtggct aacttcgacc cgggcacctt 180
tagcctgatg cgatgtgact tctgtggggc tggttttgat actcgggctg gcctctccag 240
tcatgcccg gcccaccttc gtgactttgg catcaccaac ttggggaact ccaccatctc 300
accatcaaca tccttgcaaa naacttgctg ggccacct 338

<210> 20

<211> 483

<212> DNA

<213> Mus musculus

<220>

<221> misc_feature

<222> (318)..(481)

<223> n can be any nucleotide

<400> 20

ggaggggtgta gcaaggcctg agaacatctt ccgggccgtg ggaggaggag aagcagttgg 60
 tgagtggccc agaggactgc ctggtggtgg tggcaacttc ttggtcaaag gtgagatgtg 120
 aagatcagag ggacttcggg cttctagtga gctgccagga cctccagtgc tcagcacctt 180
 ggccagggtct tttgggctag gacctggtgg gtggaggtgt cccctggcc tggattgggt 240
 ccgtctcttc aggatctccc gaagtgtgtc gatgggtgag ccgttcacat accactcagt 300
 tacacccatc tggcgcangt gggaacgtgc atggctanac aagccctttc tgttctcaaa 360
 gaatcaccac anaactcaca gcggatatct cttgttggct ctgggcctga ancatctccg 420
 tanattggcc canggtcctc accccantta ngcgggaaag gcatggtnaa aagtaacctt 480
 ngc 483

<210> 21

<211> 51

<212> PRT

<213> SBD mutant

<400> 21

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | His | Leu | Gly | Val | Gly | Met | Glu | Ala | Pro | Leu | Leu | Gly | Phe | Pro | Thr |
| 1 | | | 5 | | | | | | 10 | | | | | 15 | |
| Met | Asn | Ser | Asn | Leu | Ser | Glu | Val | Gln | Lys | Val | Leu | Gln | Ile | Val | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asn | Thr | Val | Ser | Arg | Gln | Lys | Met | Asp | Cys | Lys | Thr | Glu | Asp | Ile | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Lys | Leu | Lys | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | |

<210> 22

<211> 23

<212> DNA

<213> F3th12F (forward primer)

<400> 22

cggcggcaga tacgcctcct gca

23

<210> 23

<211> 29

<212> DNA

<213> th12 mousel (reverse primer)

